

Amendment to the Claims:

1. (Currently Amended) A magnetic resonance imaging method for forming an image of an object from a plurality of signals acquired by an array of multiple receiver antennae, wherein comprising:

[[-]] exciting spins are excited in a part of the object,

[[-]] selecting slices within a predetermined rectangular Field-of-View are selected having a Cartesian coordinate system for scanning the object,

[[-]] scanning said selected slices are scanned in an oblique relationship with respect to the cartesian coordinate system of said Field-of-View, such that a center of each of the oblique slice lies along a longitudinal axis of the Cartesian coordinate system of the Field-of-View and such that edges of the oblique slices are contained in the Field-of-View,

[[-]] measuring MR signals are measured along a predetermined trajectory containing a plurality of lines in said slices in k-space by application of a read gradient and other gradients[,,]

~~wherein said slices are positioned in lengthwise direction for obtaining a staggered arrangement of said slices such that the beginning and the end positions of each of said slices are at least approximately within said Field-of View.~~

2. (Currently Amended) A method as claimed in claim 1, wherein each of the selected slices are rotated uniformly about its center over a predetermined angle in order to obtain said oblique relationship.

3. (Currently Amended) A method as claimed in claim 1, wherein the ~~beginning position~~ edge of any subsequent slice with respect to the prior one is shifted over the slice thickness multiplied with the ~~sinus~~ sine of the rotating angle.

4. (Previously Presented) A method as claimed in claim 3, wherein lines to be scanned within each of said slices have a uniform offset along a line perpendicular to the direction of the slice.

5. (Currently Amended) A magnetic resonance imaging apparatus for obtaining an MR image from a plurality of signals comprising:

[[[-]] means for excitation of spins in a part of the object,

[[[-]] means for selection of slices with a predetermined Field-of-View for scanning the object,

[[[-]] means for selecting setting scanning parameters to scan said slices;

in an oblique relationship with respect to the a cartesian Cartesian coordinate system of said Field-of-View,

[[[-]] ~~means for measuring~~ MR signals along a predetermined trajectory containing a plurality of lines in said slices in k-space by application of a read gradient and other gradients,

[[[-]] ~~means for setting~~ the scanning direction of said slices in such a manner that tissue outside the area of interest predetermined Field-of-View is not covered, and

[[[-]] ~~means for positioning~~ said slices such that beginning positions of each slice, center positions of each slice, and end positions of each slice, lie along lines parallel to a longitudinal coordinate of the Cartesian coordinate system of the Field-of-View, and ~~in lengthwise~~ direction obtaining a staggered arrangement of said slices

such that the beginning and the end positions of each of said slices are at least approximately within the area of interest Field-of-View, and.

means for measuring MR signals along a predetermined trajectory containing a plurality of lines in said slices in k-space by application of a read gradient and other gradients.

6. (Original) A magnetic resonance imaging apparatus as claimed in claim 5, further comprising means for rotating the selected slices uniformly over a predetermined angle in order to obtain said oblique relationship.

7. (Original) A computer program product stored on a computer usable medium for forming an image by means of the magnetic resonance method,

comprising a computer readable program means for causing the computer to control the execution of:

- excitation of spins in a part of the object,
- selection of slices with a predetermined Field-of-View,
- selecting said slices to be scanned in an oblique relationship with respect to the cartesian coordinate system of a rectangular area of interest,
- measuring MR signals along a predetermined trajectory containing a plurality of lines in said slices in k-space by application of a read gradient and other gradients,
- setting the scanning direction of said slices in such a manner that tissue outside the area of interest is not covered, and
- positioning said slices in lengthwise direction obtaining a staggered arrangement of said slices such that the beginning and the end positions of each of said slices are at least approximately within the area covered by the slices before rotation.

8. (Original) A computer program product according to Claim 7, comprising rotating the slices uniformly over a predetermined angle in order to obtain said oblique relationship.

9. (Previously Presented) A computer program product according to claim 7, comprising providing of a uniform offset along a line perpendicular to the direction of the slice for lines to be scanned within each of said slices.

10. (New) A magnetic resonance imaging apparatus including a computer programmed to perform the method of claim 1.